## MEASURES FOR THE CONTROL AND SUPPRESSION OF OUT-BREAK OF PLAGUE IN THE PANJAB.

Proceedings of the Hon'ble the Lieutenant-Governor of the Punjab in the Home (Medical and Sanitary) Department, No. 43, dated 11th January 1898

Remarks.—The serious out-break of plague in five villages in succession on the confines of the Julluudur and Hoshiárpur Districts, though happily the measures for its extinction have so far been attended with a large measure of success, gives some cause for apprehension that the present cold weather may witness a more widespread epidemic in parts of the Punjab. In its more important outlines the policy which Government will follow in such an event is fixed and is not liable to modification. But there are points which can be left to the initiative and even to the management of private persons and the representatives of different communities if they give evidence of willingness to co-operate cordially and intelligently in the suppression of the disease; and even in that province of work which will be reserved for the officers of Government it will be possible for enlightened individuals to remove difficulties by explaiuing what is misunderstood and by suggesting those methods of carrying out the necessary measures which will cause a minimum of irritation and inconvenience. The object of these remarks is to explain in what particulars the course which Government will follow is already determined; and to invite those who have influence with particular sections of the public to place themselves in communication with their Deputy Commissioners in order to devise the most satisfactory way of giving effect to that determination. An example has been set in this respect by a body of gentlemen at Lahore, whose enquiries on the subject were the immediate occasion of these remarks, and the Lieutenant-Governor hopes that their example will be widely followed.

2. The germ to which plague is due has been described by doctors as a ground germ It clings to particular buildings and localities, unless it is conveyed at a more rapid rate from place to place in the humanbody, or in clothing, bedding, rags, hides or skins or other material which fosters it. It is this characteristic of the disease which explains the measures which Government has adopted to stamp it out. The danger lies in infected persons, in infected houses and localities, and in infected clothing, bedding and other articles. It is necessary therefore to separate the sick from the healthy, to exclude all alike from infected houses and localities till complete and scientific disinfection has been carried out, and to disinfect infected property before access is allowed to it. Disinfection, to be adequate, requires special knowledge and experience and must always be carried out under the supervision of the officers of Government.

3. The first step which must, if possible, be taken on the establishment of the disease in any town or village or part of a town or village is the complete evacuation of the infected area. The limits of the area to be thus evacuated will be for the officers of Government to determine. They may include only a single street or a single quarter; or they may extend, or, as the disease spreads, gradually be extended to, the whole of a town or the whole of a village. By complete evacuation is meant the removal of all people, healthy as well as sick, and as far as possible the removal of all property. Subject to disinfection of all articles which could by any possibility spread infection, every effort will be made to allow people to remove with them property which they will need when in segregation, and it will be desirable that they should remove with them as much of their property as possible, all their agricultural or other implements, and all their cattle and other animals. They will be allowed to remove their grain or a sufficient stock of it; but it will be necessary that this should be exposed for a certain time to the rays of the sun to remove all danger of infection. Arrangements will be made to secure the safety of all property left behind, and if it is not feasible to frame lists of it or for the people to attach their own locks to it, it will be placed under seal; and if loss is satisfactorily proved compensation will be paid.

4. It should be distinctly understood that it is not the intention of Government to destroy, by fire or otherwise, buildings or property, which are of any value and are susceptible of satisfactory disinfection. It may be necessary to destroy by fire sheds of small value and old clothes, rags and bedding which cannot be properly treated otherwise. But both in case of destruction and of damage caused in the process of disinfection the authorities will be reasonably liberal in admitting payment of compensation either in money or, when this is preferred, in kind, when the loss would fall upon people in very poor circumstances to whom it would be a great hardship to bear it.

5. When an area has been evacuated all access to it will be cut off except for the officers of Government and persons specially authorized to visit it. It will remain thus isolated for such period as the proper authorities may consider necessary; and the inhabitants will in no case be allowed to return to it till the buildings and the property in them have been adequately disinfected.

6. The persons who have left the evacuated area will remain in isolation camps until they are permitted to return to it or to leave the neighbourhood altogether. It will be necessary to keep entirely separate one from the other the following three classes:—

*First*, those suffering from plague.

*Second*, those under suspicion of infection either because they have been in contact with the sick and have resided in infected premises or for some other reason.

*Third*, the healthy.

Friends or relatives, in reasonable number, will be allowed to accompany the sick ; but if they elect to do this, they will be subjected to precisely the same restrictions as if they were themselves sufferers from the disease.

It will also be desirable to establish quarantine lines in which persons desirous of leaving the neighbourhood can be kept under observation apart from others for a period sufficient to ensure their freedom from disease. On completion of this period and after disinfection of their clothes and effects such persons should be dismissed with a certificate, on which the thumb-mark of the holder might be impressed to ensure identification and prevent transfers.

7. The Deputy Commissioners of those districts in which the larger towns of the Province are situated were requested last spring to select sites suitable for isolation camps for the inhabitants of those towns ; and the matter is one which should now receive attention in every place where it is doubtful whether adequate camping grounds could be made available at very short notice. Deputy Commissioners should also give their consideration to subsidiary questions such as that of the agency required for maintaining isolation, and for disinfecting houses and property, and the supply of materials for hutting (for which an estimate which may be useful will be found in Appendix A to these remarks). A supply of the latter might with advantage be collected at each tahsil head-quarters of any district which is threatened by the proximity of the disease. If in any instance the leaders of any particular community or the representative men of any particular place show themselves ready to provide against an out-break by devising a plan of action to be followed in that event, the Deputy Commissioner might, with advantage, invite their representations on the subject of sites for isolation camps, and, subject to any necessary restrictions on the space to be occupied by each class or individual and the general plan of the camp and also to considerations of the possibility of adequately guarding it with the available force of police, might leave it to private persons to determine the character of the shelters to be erected and to build for themselves. Such communities or associations of individuals should also be invited to propose their own arrangements for hospitals, and for medical attendance and nursing in these camps ; for so long as satisfactory arrangements of this character can be made by private agency Government has no desire to bestow any portion of its own much needed resources in medical staff and equipment in quarters where members of the public are prepared to provide their own.

8. The measures for the regulation of egress and ingress to the camps will be a matter for the officers of Government to determine. But even in connection with these the representatives of particular communities and castes will be able to render useful assistance in several particulars. One of the difficulties for which provision must be made is the securing to the residents of the camps of access to their ordinary avocations or to the means of subsistence in some form. It will in the case of agricultural villages usually be possible to allow agriculturists to go about their ordinary field work, and arrangements for permitting persons practising certain handicrafts to remove the implements of their trade with them into camp will also generally be feasible. Employment may be found for others in the construction of shelters or in the disinfection of houses and property. But circumstances are easily imaginable in which the difficulty of finding work and wages for considerable numbers of men would be very great ; and in such circumstances help might reasonably be looked for from public spirited individuals either on behalf of the public in general or of their own caste or community, and such help might take sometimes the form of organized charity, sometimes that of the provision of work, sometimes that of useful advice or suggestion.

9. To sum up the foregoing paragraphs there are five principal objects for which it will be necessary to provide in the event of an out-break of plague—

*First*, the evacuation and isolation of the infected area, whether a town or a part of a town or a village or a part of a village.

*Secondly*, the establishment of isolation camps for the inhabitants of the evacuated area ; the sick, the suspected, and the healthy being separately isolated, subject to arrangements for the admission of the relatives or friends of the sick to attend upon them.

*Thirdly*, the disinfection of all property in the infected area, whether removed to the isolation camps or left behind.

*Fourthly*, the treatment of the sick in the isolation camp.

*Fifthly*, the regulation of the return of the inhabitants to the evacuated area and the disinfection of the houses there before re-occupation.

For all these the intelligent and cordial co-operation of the people will be necessary to ensure success, and there will be no portion of the proceedings in which private persons cannot render signal assistance, if they realize that the main principles of the policy to be followed are finally determined, and direct their attention to the most suitable means of giving effect to those principles. Should the leading members of the community desire to make their own arrangements, they may be invited to make proposals, which should be considered and, if proper, accepted. The establishment of isolation camps and hospitals and the treatment of the sick in such hospitals are matters which afford most scope for private endeavour. There are also no doubt many details, such as the provision of suitable burial and burning grounds for the bodies of those who have died of plague, in which private persons will be able to give valuable help and to make arrangements for their own communities, subject to the approval of the Deputy Commissioner.

10. It has been suggested to the Lieutenant-Governor that it may under certain circumstances be possible to allow people who have sufficient accommodation in their own houses to provide hospital accommodation for their sick relatives on the spot. This is a matter on which it is impossible to give any decision of general application. A spacious house standing in a large garden at a distance from all habitations and so situated that adequate arrangements could be made by the authorities to regulate egress and ingress without detaching an unduly large portion of the available police force might, if approved for the purpose by the medical and executive authorities, and if all additional expenditure entailed by the arrangement were defrayed by the residents, be suitable for the purpose indicated; but ordinarily the evacuation of the infected area must be insisted on so long as it is possible to work upon this mode of dealing with a visitation of plague. It is unlikely that it will be feasible to lend the services of medical officers or to give separate police contingents to preserve isolation if small hospitals of this character are established at a distance from the spot where the resources of Government are concentrated; and it must be assumed that unless in very exceptional circumstances the use of no private house for hospital purposes would be sanctioned by the authorities; but particular cases can be considered on their merits.

11. There is one other matter of primary importance to which public attention should be invited. One of the difficulties with which this Government has already been brought face to face in the course of measures for the prevention of the spread of plague is the provision of qualified female medical attendants and nurses. But in the event of the spread of plague to any large centre in the Punjab there would be large scope for work by female volunteers, even if unqualified by hospital or medical knowledge, more particularly among the females of their own community or caste, but to some extent also among the female population in general. The Lieutenant-Governor trusts that it is not altogether out of the question that a few such in certain localities and among the more enlightened classes should offer their services for the general welfare.

12. It is now of urgent importance that the matters dealt with in the foregoing paragraphs should receive early attention; and every opportunity should be taken of directing public notice to these remarks and of inviting help and co-operation in the attainment of the objects in view, it being always understood that proposals for the alteration of those main principles of action which are already determined should not be put forward because they cannot be entertained.

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ORDER.—Ordered that the foregoing remarks be published in the *Punjab Gazette* and circulated to the Public Press; and that a copy be sent to each Commissioner and Deputy Commissioner, to the Inspector-General of Civil Hospitals, the Sanitary Commissioner, and to each Civil Surgeon in the Punjab for information and guidance, in continuation of the circular from this office, No. 1342, dated 8th November 1897.

By order of the Hon'ble the Lieutenant-Governor,

H. J. MAYNARD,

*Junior Secretary to Government, Punjab.*

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## APPENDIX A.

*Materials required for hutting.*

The required materials are—

Bamboos.
Sirkis (or thatched cart-covers).
Grass-string.
Thatching grass (phús or kana).

For a large hut such as is made by gbaramis (thatchers) five bamboos are required on each side, and five have to be split for cross pieces; four also are required on each side for making the end tattis. Total number of bamboos twenty-three.

Two or three pairs of sirkis are required for each hut according to size.

Five maunds of grass-string will suffice for sheds for a village of 1,200 people.

At Khán Khanán three pairs of sirkis were used for each hut, which was also well coated outside with phús grass. The tattis at the end were made entirely of this grass. These huts were considered warm, probably proof against winter rain and easily portable from one village to another. (There is no objection to transporting huts elsewhere when it is quite certain that no infected person has been in them).

In huts such as these, 100 people, or 25 families, could be provided for with about 575 bamboos and 75 pairs of sirkis.